REMARKS

Rejections under 35 U.S.C. § 102 (b)

Claims 1-17 and 24-33 were again rejected under 35 U.S.C. §102 (b) as anticipated by Hawthorne, WO 87/03605 ("Hawthorne"). This rejection is again respectfully traversed.

The Examiner has again cited Example 1 of Hawthorne, stating that "MMA in benzene in heated in the presence of a cobalt complex obtained by the contact of cobaltous acetate tetrahydrate, dimethylglyoxime, and pyridine in hydrogen to obtain oligo-MMA". Applicants respectfully submit that the Examiner is reading into Example 1 of Hawthorne subject matter that is not recited therein. According to the present invention, it was surprisingly and unexpectedly observed that appreciably more polymer than a baseline control can be formed from one or more vinylinically unsaturated monomers to form a polymer by contacting the monomers with a chain transfer agent and a hydrogen atom donor in the absence of free radical initiators at a temperature from about room temperature to about 240 °C.

Example 1 of Hawthorne discloses a process that includes two consecutive steps, and at no time in the disclosed process are MMA and hydrogen in contact with the chain transfer catalyst **simultaneously**. The first paragraph of Example 1 of Hawthorne describes the synthesis and isolation of the Co(III)cyanoisopropyl catalyst, wherein cobaltous acetate tetrahydrate, dimethylglyoxime, **methacrylonitrile**, and pyridine in **methanol** are reacted under hydrogen to yield "Agent 1." In a subsequent step "Agent 1" is reacted in the absence of hydrogen with methyl methacrylate to give oligomer. Thus the present claims in which the chain transfer catalyst and hydrogen are combined are not anticipated by the disclosure of Hawthorne.

In support of Applicants' position, Applicants offer the following. 1. It is known that in free radical polymerizations, there are a variety of termination reactions. Thus any initiator will initiate one chain, but when that initiator is consumed by combination, disproportionation or other terminating reaction, it produces no further polymer.

In the presence of a chain transfer catalyst, the meaning of the term "one chain" can vary, and the meaning can be determined by considering the context in which it is used. As used herein and in the present application, the term refers to the cumulative mass of macromonomers that is generally produced by one initiator molecule. That cumulative mass is generally 50-90% of the mass of a single high molecular weight polymer chain in the absence of a chain transfer catalyst.

It is known to those skilled in the art that Co(III) species such Agent 1 will initiate a single chain, forming Co(II) and the oligomers as formed according to Example 1 of Hawthorne. The resulting Co(II) initiates no further oligomerization.

The Examiner's attention is respectfully directed to the Comparative Examples of the present application.

In contrast to the disclosure of Hawthorne, the present claims recite the simultaneous presence of both a chain transfer catalyst and a hydrogen atom donor. Thus, Applicants maintain that Hawthorne does not disclose, teach, or suggest the presently claimed invention. Not only does Hawthorne fail to disclose the presently claimed process; Applicants respectfully point out to the Examiner that the amount of catalyst used in Example 1 of Hawthorne (disclosed in the second paragraph thereof) is approximately ten-fold the amount of catalyst level used in the Examples of the present application. Applicants further respectfully submit that the purpose of the Comparative Examples in the present application is to demonstrate what occurs when the catalyst is employed without hydrogen.

CONCLUSION

Applicant submits that all of claims 1-17 and 24-32 are patentable over Hawthorne and in condition for allowance. In view of the foregoing, withdrawal of the rejections of record and allowance of the above-referenced application is respectfully requested. Applicant requests a telephonic interview between the Examiner and Applicant and Applicants' undersigned representative to discuss remaining issues. An Interview Request Form is submitted herewith.

Respectfully submitted,

Gail Dalickas

GAIL A DALICKAS
ATTORNEY FOR APPLICANTS
Registration No.: 40,979
Telephone: (302) 992-4947
Facsimile: (302) 992-5374

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